

Decision Support System (DSS)

Technical Manual

**Software Version 3.0
Patch ECX*3.0*177**



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1 Introduction

The Decision Support System (DSS) is the designated Managerial Cost Accounting (MCA) System of the Department of Veterans Affairs (VA) as mandated in the Veterans Health Administration ([VHA Directive 1750 VHA Managerial Cost Accounting System \(Decision Support System \(DSS\)\)](#), March 24, 2015).

DSS is a derived database built from standard VHA data sources. The Managerial Cost Accounting Office (MCAO) uses clinical and financial data to provide state-of-the-art activity-based costing and clinical productivity analyses.

This is a design-to-schedule project with a compulsory Patch Release date of no later than November 1 of the new Fiscal Year (FY). This project enables the MCAO to accurately accommodate changes to the primary Clinical Transaction Systems made during the preceding year, ensuring the workload data has been accurately captured and costed to the Product Level.

MCA Cost Data is used at all levels of the VA for functions such as budgeting and resource allocation. Additionally, the system contains a rich repository of clinical information used to promote a proactive approach to the care of high-risk (i.e., diabetes and acute coronary patients) and high-cost patients.

1.1 Overview

The DSS Extracts Version 3.0 software provides a means of exporting data from selected Veterans Health Information Systems and Technology Architecture (VistA) software modules and transmitting it to a DSS database residing at the Austin Information Technology Center (AITC).

This transfer is accomplished through a set of extract routines, intermediate files, and transmission routines. Data from VistA packages is stored by the extract routines in the intermediate files, where it is temporarily available for local use and auditing. The data is then transmitted to the AITC, where it is formatted and uploaded into commercial software. After the data has been successfully uploaded into the commercial software, it is purged from the intermediate files.

1.2 Purpose

The DSS Technical Manual serves the following purposes:

- Provides technical information to aid Automated Data Processing Application Coordinators (ADPACs) and Office of Information and Technology (OI&T) service staff responsible for implementing and maintaining the software.
- Provides technical information to aid Database Administrator (DBA) personnel responsible for maintaining database files.
- Provides security information for Information Security Officer (ISO) and Regional Information Security Officer (RISO) staff.

1.3 Functions of the Software

The DSS Extracts software provides the following functionalities:

- Implements Extracts Processes
- Schedules Extracts
- Verifies Extracts against other VistA Reports
- Transmits Extracts to Commercial Software

- Verifies Transmissions
- Allows Deletion of Extracts
- Allows Purging of Holding Files for the Intravenous (IV) Detail Extract (IVP), the Unit Dose Local Extract (UDP), and the VistA Blood Establishment Computer Software (VBECS) Blood Bank Extract (LBB).

2 Orientation

This manual is recommended as a reference document for technical users (e.g., ADPACs or OI&T). Package security information is located in the Security Management and Security Keys sections of this manual.

2.1 User Responses

User responses in the examples presented in this manual are displayed in **bold** type.

3 General Information

This section contains general information to aid in the understanding and use of this document.

3.1 Namespace Information

The namespace assigned to the DSS Extracts software is ECX (Event Capture Extract).

3.2 Background Job Options

There are no routine background jobs that must run to maintain normal package operation for DSS Extracts. However, users performing a DSS data extract must execute it as a background task (queued through TaskManager).

Both Statistical Analysis System (SAS) and Extract Audit reports can be displayed on the user's screen, printed immediately to a print device, or queued to a print device. All other reports can only be printed as queued background jobs and cannot be stopped through the TaskMan User [XUTM USER] option.

Table 1 lists the functions that must be queued as background tasks.

Table 1: Required Queued Background Tasks

Function	Menu Option	Details
Transmit extract data	[ECXTRANS]	Transmit Data from Extract Files
Stop extract Background Task	[XUTM USER]	<ul style="list-style-type: none"> • TaskMan user option. • Users are able to stop the Extract Background Task while it is running by using the TaskMan user [XUTM USER] option. • Data in any resulting incomplete extract should be deleted using the <i>Delete Extract Files</i> [ECXDELEF] option. • If queued as a background task, users can stop the background task while it is running by using the TaskMan user [XUTM USER] option.
Delete extract data	[ECXDELEF]	Delete Extract Files
Purge extract holding files	[ECXPURG]	<ul style="list-style-type: none"> • Purge Extract Holding Files. • Data in the holding files for the IVP, UDP and VBECS files can be purged using the <i>Purge Extract Holding Files</i> [ECXPURG] option.

3.3 Resource Requirements

Table 2 provides information on extract files. The bytes per record estimates in this table include the file cross-reference.

Table 2: Extract Name/Bytes per Record

Extract Name	Bytes per Record (Estimated Mean Size)
ADM - Admissions Extract	350
BCM - Bar Code Medication Administration (BCMA) Extract	450
CLI - Clinic Extract	485
ECQ - Quality: Audiology and Speech Pathology Audit & Review (QUASAR) Extract	450
ECS - Event Capture Local Extract	450
IVP - IV Detail Extract	500
LAB - Laboratory Extract	250
LAR - Lab Results Extract	200
LBB - Blood Bank Extract	200
MOV - Physical Movement Extract	225
PRE - Prescription Extract	425
PRO - Prosthetics Extract	400
RAD - Radiology Extract	300
SUR - Surgery Extract	425
TRT - Treating Specialty Change Extract	275
UDP - Unit Dose Local Extract	375

3.3.1 Special Note on IVP and UDP Extracts

IV orders will accumulate in the IV EXTRACT DATA file (#728.113), and Unit Dose orders will accumulate in the UNIT DOSE EXTRACT DATA file (#728.904). These files are loaded dynamically as Pharmacy orders for IV, and unit dose medicines are processed. Each record in these files uses approximately 100 bytes.

Extreme caution must be used when performing maintenance on the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904). If data in either file is purged, the IVP or UDP monthly extract may be incomplete. It is strongly recommended that, at a minimum, sites maintain all data from the current fiscal year.

The holding files for IVP and UDP can be purged. Two functions were created to regenerate purged IVP and UDP holding file data. The steps shown in Table 3 must be executed from the Systems Manager Menu to access these options:

Table 3: Steps to Recreate IVP and UDP Holding Files

Step	Action/Menu Option
1	Extract Manager's Options
2	Transmission Management

Step	Action/Menu Option
3	Recreate Extract Holding Files

Note: Holding files can become quite large if appropriate purging is not performed. The option, [Purge Extract Holding Files \[ECXPURG\]](#), purges holding files from IVP and UDP by date range.

3.3.2 Special Note on Pharmacy Extract Files

The Pharmacy DSS Extract files shown in Table 4 are audited when entries are edited through the menu option Pharmacy Volume Edit [ECX PHA VOL EDIT]. Entries are stored in the AUDIT file (#1.1).

Table 4: Audited Fields When Updates Occur

File	File#	Audited Fields
PRESCRIPTION EXTRACT	#727.81	The QUANTITY and UNIT OF ISSUE fields are audited.
UNIT DOSE LOCAL EXTRACT	#727.809	Only updates to the QUANTITY field are audited.
IV DETAIL EXTRACT	#727.819	Updates to the QUANTITY and TOTAL DOSES PER DAY fields are audited.
BCMA EXTRACT	#727.833	Updates to the COMPONENT DOSE GIVEN and COMPONENT UNITS fields are audited.

3.3.3 Time Estimates for Extracts

Extracts generally require approximately two to four minutes per 1000 records extracted and should be queued to run during a non-peak system usage period.

Table 5 contains examples of approximate run times for extracts.

Table 5: Extract Time Estimates

Extract Name	Approximate Length of Time
Admissions (ADM)	Less than ten minutes
Clinic (CLI)	5 hours for 48,000 records
Laboratory (LAB)	6 hours for 100,000 records
Physical Movement (MOV)	Less than ten minutes
Prescription (PRE)	3.5 hours for 49,000 records
Treating Specialty Change (TRT)	Less than ten minutes

3.4 Secure Data Transmission

Data is transmitted to the AITC using VA MailMan mail messages. The first line of each message is a header that identifies the following entities: Site, Extract, Year and Month, and SAS version identifier in the format shown in Figure 1:

Figure 1: Data Transmission Header

521RAD199710007			
Site	Extract	Year and Month	Version ID
521	RAD	199710	007

During the transmission process, its Internal Entry Number (IEN) is entered in the MESSAGE NUMBER field (#301) of the DSS EXTRACT LOG file (#727). There are options that allow the Extract Manager or designee to monitor this file. As confirmation messages are received from the AITC, multiple entries in the MESSAGE NUMBER field (#301) are deleted.

4 Implementation and Maintenance

The Management Menu enables the Extract Manager or designee to perform a variety of functions, listed in Table 6:

Table 6: Management Menu Options & Activities

Menu Option	Activity
Perform Maintenance Activities	<ul style="list-style-type: none"> • Produce Community Based Outpatient Clinic (CBOC) Activity Reports • Perform Current Procedural Terminology (CPT) and International Classification of Diseases (ICD) Inquiries • Perform DSS Ward Management Activities • Produce Laboratory Results DSS Logical Observation Identifiers, Names, and Codes (LOINC) Code Reports • Add or Modify Pharmacy IV Room Division Entries • Print Pharmacy IV Room Worksheet • Perform Pharmacy National Drug Code (NDC) Lookup • Produce Pharmacy Volume Log Maintenance Activities • Print Feeder Key Listings • Print Feeder Location Listings • Produce Prosthetics Reports • Maintain Prosthetics Extract Quantity Information • Perform DSS Clinic Setup Activities • Produce DSS Clinic Setup Reports • Perform Inpatient Census Setup Activities • Produce Test Patient List • View Gains and Losses (G&L) Corrections Listings
Perform Pre-Extract Audit Activities	<ul style="list-style-type: none"> • Produce Event Capture Pre-Extract Unusual Volume Report • Produce Laboratory Blood Bank (LBB) Pre-Extract Audit • Produce Pharmacy Pre-Extract Incomplete Feeder Key Reports • Produce Pharmacy Pre-Extract Unusual Cost Reports • Produce Pharmacy Pre-Extract Unusual Volume Reports • Produce IVP/UDP Source Audit Reports • Produce Prosthetic Pre-Extract Unusual Cost Report • Produce Surgery Pre-Extract Volume Report • Produce Surgery Pre-Extract Unusual Volume Report

Menu Option	Activity
Produce Package Extracts	<ul style="list-style-type: none"> • Produce Admissions Extract • Produce BCMA Extract • Produce Blood Bank Extract • Produce Clinic Extract • Produce Event Capture Extract • Produce IV Extract • Produce Lab Extract • Produce Lab Results Extract • Produce Physical Movement Extract • Produce Prescription Extract • Produce Prosthetics Extract • Produce QUASAR Extract • Produce Radiology Extract • Produce Surgery Extract • Produce Treating Specialty Change Extract • Produce Unit Dose Extract
Produce SAS Extract Audit Reports	<ul style="list-style-type: none"> • Create the SAS Extract Audit Reports
Produce Extract Audit Reports	<ul style="list-style-type: none"> • Create Extract Audit Reports • Create Radiology Extract CPT Code Audit Report • Create Extract Stop Code Validity Reports
Perform Extract Transmission Management Activities	<ul style="list-style-type: none"> • Review Extracts for Transmission • Transmit Extract Files • Produce Summary Report of Extract Logs • Delete Extract Files • Purge Extract Holding Files • Recreate Extract Holding Files

Refer to the [DSS Extracts v3.0 Installation/Rollback Guide](#) for more information about installing and implementing the software.

5 Routines

This section describes relevant technical aspects of DSS Application routines.

5.1 Routine List

From the Systems Manager Menu, perform the steps outlined in Table 7 to obtain a list of routines contained in the DSS package:

Table 7: Steps to List DSS Routines

Step	Action/Menu Option
1	Programmer Options
2	Routine Tools
3	First Line Routine Print
4	All Routines? No => <Enter>
5	Routine: ECX*
6	Routine: <Enter>
7	(A)lpha, (D)ate, (P)atched, OR (S)ize ORDER: A// <Enter>
8	Include line (2), Include lines 2&(3), (N)one: None/ <Enter>
9	DEVICE: HOME// <Enter> HOME (CRT) Right Margin: 80// <Enter>

5.2 Callable Routines/Entry Points/Application Programmer Interfaces

The DSS Extracts software has no callable Application Programmer Interfaces (APIs).

5.3 Routines to Map

There are no routines in DSS Extracts that are recommended for mapping.

5.4 External Interfaces

There are no external interfaces used by DSS Extracts.

6 Files

This section contains information pertaining to the files manipulated by the DSS application software.

6.1 Global Placement

DSS Extracts use one global file for data storage: ^ECX. During first-time installation, use global protection and placement when appropriate.

6.2 File List

The DSS Extracts software, with all patches installed, exports the files that appear in Table 8. Use the Systems Manager Menu > VA FileMan > Data Dictionary Utilities > List File Attributes option to print the Data Dictionary (DD).

Note: [VA Directive 6402, Modifications to Standardized National Software](#), August 28, 2013 prohibits local modification of these files.

Table 8 lists the file names, associated file numbers, and extract abbreviations (where applicable):

Table 8: File List Table

File Number	Abbreviation	File Name
727	-	DSS EXTRACT LOG
727.1	-	EXTRACT DEFINITIONS
727.2	-	DSS Lab Tests
727.29	-	DSS LOINC FILE
727.3	-	DSS DIVISION IDENTIFIER
727.4	-	DSS WARD
727.5	-	DSS MH TESTS
727.7	-	LAB RESULTS TRANSLATION
727.802	ADM	ADMISSION EXTRACT
727.804	-	CLINIC NOSHOW EXTRACT
727.805	-	NURSING EXTRACT
727.806	-	DENTAL EXTRACT
727.808	MOV	PHYSICAL MOVEMENT EXTRACT
727.809	UDP	UNIT DOSE LOCAL EXTRACT
727.81	PRE	PRESCRIPTION EXTRACT
727.811	SUR	SURGERY EXTRACT
727.812	-	MENTAL HEALTH EXTRACT
727.813	LAB	LABORATORY EXTRACT
727.814	RAD	RADIOLOGY EXTRACT
727.815	ECS	EVENT CAPTURE LOCAL EXTRACT
727.816	-	CLINIC I EXTRACT
727.817	TRT	TREATING SPECIALTY CHANGE EXTRACT

File Number	Abbreviation	File Name
727.818	-	CLINIC II EXTRACT
727.819	IVP	IV DETAIL EXTRACT
727.82	-	ADMISSION SETUP EXTRACT
727.821	-	PHYSICAL MOVEMENT SETUP EXTRACT
727.822	-	TREATING SPECIALTY CHANGE SETUP EXTRACT
727.823	-	PAI EXTRACT
727.824	LAR	LAB RESULTS EXTRACT
727.825	ECQ	QUASAR EXTRACT
727.826	PRO	PROSTHETICS EXTRACT
727.827	CLI	CLINIC EXTRACT
727.829	LBB	BLOOD BANK EXTRACT
727.831	-	DSS TREATING SPECIALTY TRANSLATION
727.832	-	NUTRITION EXTRACT
727.833	BCM	BCMA EXTRACT
728	-	DSS EXTRACTS
728.113	-	IV EXTRACT DATA
728.44	-	CLINICS AND STOP CODES
728.441	-	NATIONAL CLINIC
728.442	-	MCA LABOR CODE
728.45	-	DSS NUTRITION PRODUCT WORKSHEET
728.46	-	DSS NUTRITION DIVISION WORKSHEET
728.506	-	DSS DRUG PRODUCT CODE
728.904	-	UNIT DOSE EXTRACT DATA
729	-	DSS PRODUCTION UNIT

6.3 Field List

The modifications associated with the release of DSS FY20 Extract Sustainment Patch ECX*3.0*177 include the following list (Table 9) of modified field names and numbers by extract.

Table 9: Field Changes in DSS for Current Release

Field Name	Field Number	File Name	File Number
PLACEHOLD RELIGION	#12	ADMISSION EXTRACT	#727.802
PLACEHOLD DRG	#31	ADMISSION EXTRACT	#727.802
PLACEHOLD SHARE AGREEMNT PAYOR	#45	ADMISSION EXTRACT	#727.802
PLACEHOLD SHARE AGREEMNT INSUR	#46	ADMISSION EXTRACT	#727.802
PLACEHOLD NAT'L PAT REC FLAG	#72	ADMISSION EXTRACT	#727.802
VISTA DEA SPECIAL HDLG	#89	BCMA EXTRACT	#727.833
PLACEHOLD DSS IP #	#19	BLOOD BANK EXTRACT	#727.829

Field Name	Field Number	File Name	File Number
PLACEHOLD ENCOUNTER SC	#31	BLOOD BANK EXTRACT	#727.829
PLACEHOLD DSS PRODUCT DEPT	#43	CLINIC EXTRACT	#727.827
PLACEHOLD SHARE AGREEMNT PAYOR	#51	CLINIC EXTRACT	#727.827
PLACEHOLD SHARE AGREEMNT INSUR	#52	CLINIC EXTRACT	#727.827
PLACEHOLD DSS IP #	#76	CLINIC EXTRACT	#727.827
PLACEHOLD NAT'L PAT REC FLAG	#83	CLINIC EXTRACT	#727.827
SERVICE CONNECTED STATUS	#158	CLINIC EXTRACT	#727.827
NON-COUNT FLAG	#159	CLINIC EXTRACT	#727.827
PLACEHOLD DSS IP #	#75	EVENT CAPTURE LOCAL EXTRACT	#727.815
STATE HOME NAME	#130	EVENT CAPTURE LOCAL EXTRACT	#727.815
PATIENT NO. - DFN	#4	IV DETAIL EXTRACT	#727.819
DAY	#8	IV DETAIL EXTRACT	#727.819
VA DRUG CLASSIFICATION	#9	IV DETAIL EXTRACT	#727.819
QUANTITY	#10	IV DETAIL EXTRACT	#727.819
PHARMACY IV DISPENSING FEE	#18	IV DETAIL EXTRACT	#727.819
ORDERING PROVIDER	#37	IV DETAIL EXTRACT	#727.819
ORDERING DATE	#39	IV DETAIL EXTRACT	#727.819
PLACEHOLD DSS IP #	#72	IV DETAIL EXTRACT	#727.819
VISTA DEA SPECIAL HDLG	#95	IV DETAIL EXTRACT	#727.819
PLACEHOLD DSS IP #	#36	LABORATORY EXTRACT	#727.813
PLACEHOLD ENCOUNTER SC	#48	LABORATORY EXTRACT	#727.813
PLACEHOLD LAB RESULTS TRANS	#27	LABORATORY RESULTS EXTRACT	#727.824
PLACEHOLD ENCOUNTER SC	#33	LABORATORY RESULTS EXTRACT	#727.824
PLACEHOLD ENC CAMP LEJEUNE	#35	LABORATORY RESULTS EXTRACT	#727.824
PLACEHOLD TYPE	#13	PHYSICAL MOVEMENT EXTRACT	#727.808
PLACEHOLD ENCOUNTER SHAD	#18	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD SHARE AGREEMNT PAYOR	#47	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD SHARE AGREEMNT INSUR	#48	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD DSS IP #	#73	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD ENCOUNTER CV	#79	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD AGENT ORANGE ENC	#85	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD ENCOUNTER SWAC	#86	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD ENC HEAD/NECK CA	#87	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD ENCOUNTER MST	#88	PRESCRIPTION EXTRACT	#727.81

Field Name	Field Number	File Name	File Number
PLACEHOLD RADIATION ENCOUNTER	#90	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD ENCOUNTER SC	#99	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD ENC CAMP LEJEUNE	#102	PRESCRIPTION EXTRACT	#727.81
VISTA DEA SPECIAL HDLG	#107	PRESCRIPTION EXTRACT	#727.81
PLACEHOLD COST OF TRANSACTION	#24	PROSTHETICS EXTRACT	#727.826
PLACEHOLD LAB LABOR COST	#25	PROSTHETICS EXTRACT	#727.826
PLACEHOLD LAB MATERIAL COST	#26	PROSTHETICS EXTRACT	#727.826
PLACEHOLD SHARE AGREEMNT PAYOR	#44	PROSTHETICS EXTRACT	#727.826
PLACEHOLD SHARE AGREEMNT INSUR	#45	PROSTHETICS EXTRACT	#727.826
PLACEHOLD DSS IP #	#67	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENCOUNTER CV	#73	PROSTHETICS EXTRACT	#727.826
PLACEHOLD AGENT ORANGE ENC	#76	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENCOUNTER SWAC	#77	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENC HEAD/NECK CA	#78	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENCOUNTER MST	#79	PROSTHETICS EXTRACT	#727.826
PLACEHOLD RADIATION ENCOUNTER	#80	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENCOUNTER SHAD	#89	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENCOUNTER SC	#97	PROSTHETICS EXTRACT	#727.826
PLACEHOLD ENC CAMP LEJEUNE	#100	PROSTHETICS EXTRACT	#727.826
NEW COST OF TRANSACTION	#105	PROSTHETICS EXTRACT	#727.826
NEW LAB LABOR COST	#106	PROSTHETICS EXTRACT	#727.826
NEW LAB MATERIAL COST	#107	PROSTHETICS EXTRACT	#727.826
PLACEHOLD DSS IP #	#75	QUASAR EXTRACT	#727.825
PLACEHOLD DSS IP #	#37	RADIOLOGY EXTRACT	#727.814
PLACEHOLD ENCOUNTER SC	#50	RADIOLOGY EXTRACT	#727.814
PLACEHOLD ENC CAMP LEJEUNE	#52	RADIOLOGY EXTRACT	#727.814
VA DRUG CLASSIFICATION	#9	UNIT DOSE LOCAL EXTRACT	#727.809
QUANTITY	#10	UNIT DOSE LOCAL EXTRACT	#727.809
WARD	#11	UNIT DOSE LOCAL EXTRACT	#727.809
PROVIDER	#12	UNIT DOSE LOCAL EXTRACT	#727.809
NDC	#16	UNIT DOSE LOCAL EXTRACT	#727.809
PLACEHOLD DSS IP #	#67	UNIT DOSE LOCAL EXTRACT	#727.809
VISTA DEA SPECIAL HDLG	#91	UNIT DOSE LOCAL EXTRACT	#727.809

6.3.1 Templates and File Flow

Perform the steps listed in Table 10 from the Systems Manager Menu. These steps are used to obtain information about the templates and mapped file-flow relationships for DSS Extracts when all patches are installed.

Table 10: Steps to List DSS Templates & Map Menu Options

Step	Actions/Menu Options for Templates	Actions/Menu Options for File Flows (Relationships between Files)
1	VA FileMan	VA FileMan
2	Print File Entries	Data Dictionary Utilities
3	OUTPUT FROM WHAT FILE: Print Template or Sort Template	Map Pointer Relations
4	SORT BY: NAME// Name	Select PACKAGE NAME: DSS EXTRACTS
5	START WITH NAME: FIRST// ECX	Remove FILE: <Enter>
6	GO TO NAME: LAST// ECXZ	Add FILE: > Enter name or number for files to include in the output. Note: This prompt will repeat.
7	WITHIN NAME, SORT BY: <Enter>	Add FILE:<Enter>
8	FIRST PRINT FIELD: Name	Enter name of file group for optional graph header: DSS EXTRACTS// <Enter>
9	THEN PRINT FIELD: <Enter>	DEVICE: <Enter> HOME (CRT) <Enter>
10	Heading (S/C): PRINT TEMPLATE LIST// <Enter>	Not Applicable (N/A)
11	START AT PAGE: 1// <Enter>	N/A
12	DEVICE: <Enter> HOME (CRT) Right Margin: 80// <Enter>	N/A

7 Exported Options

This section provides relevant information on DSS application software exported options.

7.1 Menu Online

The DSS Extracts software contains one primary menu option, Extract Manager's Options [ECXMGR], which contains options for the following six submenus. These options are fixed and are not subject to modification except by the Software Developers. These options are accessed by entering Extract Manager's Options from the Systems Manager Menu; the menu options are listed in Table 11.

Table 11: Extract Manager's Options

Menu Option	Description
M	Maintenance
R	Pre-Extract Audit Reports
P	Package Extracts
S	SAS Extract Audit Reports
E	Extract Audit Reports
T	Transmission Management

7.2 Menu Diagrams

From the Systems Manager Menu, perform the steps listed in Table 12 to obtain information concerning the menus exported with the DSS Extracts software:

Table 12: Steps to Obtain Information on Exported Menus

Step	Action/Menu Option
1	Menu Management
2	Display Menus and Options
3	Menu Diagrams (with Entry/Exit Actions)
4	Select USER (U.xxxxx) or OPTION (O.xxxxx) name: ECXMGR
5	DEVICE: HOME// <Enter> HOME (CRT) Right Margin: 80// <Enter>

7.3 Stand-alone Options

All of the DSS Extracts options are designed to be stand-alone.

7.4 VA FileMan Access Codes

Table 13 lists the recommended VA FileMan access codes for the DSS Extract Software.

Table 13: VA FileMan Access Codes

File Name	File #	Data Definition (DD)	Read Access (RD)	Write Access (WR)	Delete Access (DEL)	Learn-As-You-Go (LAYGO)
DSS EXTRACT LOG	727	@	N/A	@	@	@

File Name	File #	Data Definition (DD)	Read Access (RD)	Write Access (WR)	Delete Access (DEL)	Learn-As-You-Go (LAYGO)
EXTRACT DEFINITIONS	727.1	^	N/A	^	^	^
DSS LOINC FILE	727.29	^	N/A	^	^	^
DSS DIVISION IDENTIFIER	727.3	^	N/A	^	^	^
DSS WARD	727.4	^	N/A	^	^	^
DSS MH TESTS	727.5	^	N/A	^	^	^
LAB RESULTS TRANSLATION	727.7	@	N/A	N/A	N/A	N/A
ADMISSION EXTRACT	727.802	@	@	@	@	@
CLINIC NOSHOW EXTRACT	727.804	N/A	N/A	N/A	N/A	N/A
NURSING EXTRACT	727.805	N/A	N/A	N/A	N/A	N/A
DENTAL EXTRACT	727.806	N/A	N/A	N/A	N/A	N/A
PHYSICAL MOVEMENT EXTRACT	727.808	@	@	@	@	@
UNIT DOSE LOCAL EXTRACT	727.809	@	@	@	@	@
PRESCRIPTION EXTRACT	727.81	@	@	@	@	@
SURGERY EXTRACT	727.811	@	@	@	@	@
LABORATORY EXTRACT	727.813	@	@	@	@	@
RADIOLOGY EXTRACT	727.814	@	@	@	@	@
EVENT CAPTURE LOCAL EXTRACT	727.815	@	@	@	@	@
CLINIC I EXTRACT	727.816	@	@	@	@	@
TREATING SPECIALTY CHANGE EXTRACT	727.817	@	@	@	@	@
CLINIC II EXTRACT	727.818	@	@	@	@	@
IV DETAIL EXTRACT	727.819	@	@	@	@	@
ADMISSION SETUP EXTRACT	727.82	@	@	@	@	@
PHYSICAL MOVEMENT SETUP EXTRACT	727.821	@	@	@	@	@
TREATING SPECIALTY CHANGE SETUP EXTRACT	727.822	@	@	@	@	@
PAI EXTRACT	727.823	N/A	N/A	N/A	N/A	N/A
LAB RESULTS EXTRACT	727.824	@	@	@	@	@
QUASAR EXTRACT	727.825	@	@	@	@	@
PROSTHETICS EXTRACT	727.826	@	@	@	@	@
CLINIC EXTRACT	727.827	@	@	@	@	@
BLOOD BANK EXTRACT	727.829	@	@	@	@	@
DSS TREATING SPECIALTY TRANSLATION	727.831	@	@	@	@	@

File Name	File #	Data Definition (DD)	Read Access (RD)	Write Access (WR)	Delete Access (DEL)	Learn-As-You-Go (LAYGO)
BCMA EXTRACT	727.833	@	@	@	@	@
DSS EXTRACTS	728	@	N/A	@	@	@
IV EXTRACT DATA	728.113	@	@	@	@	@
CLINICS AND STOP CODES	728.44	@	N/A	@	@	@
NATIONAL CLINIC	728.441	@	N/A	@	@	@
DSS DRUG PRODUCT CODE	728.506	N/A	N/A	N/A	N/A	N/A
UNIT DOSE EXTRACT DATA	728.904	@	@	@	@	@
DSS PRODUCTION UNIT	729	^	N/A	^	^	^

7.5 Security Management

There are no additional security management related concerns associated with the DSS application.

The DSS Extracts software does not impose any additional legal requirements on the user, nor does it relieve the user of any legal requirements.

7.6 Security Keys

From the System Manager's Menu, perform the steps listed in Table 14 to obtain the security keys information contained in the DSS Extracts Package:

Table 14: Steps to Obtain Security Key Information

Step	Action/Menu Option
1	VA FileMan
2	Print File Entries
3	Output from what File: AUDIT// SECURITY KEY
4	Sort by: NAME// <Enter>
5	Start with NAME: FIRST// ECX
6	Go to NAME: LAST// ECXZ
7	Within NAME, Sort by: <Enter>
8	First Print FIELD: NAME
9	Then Print FIELD: DESCRIPTION (word-processing)
10	Then Print FIELD: <Enter>
11	Heading (S/C): SECURITY KEY List// <Enter>
12	START at PAGE: 1// <Enter>
13	DEVICE: HOME (CRT) Right Margin: 80// <Enter>

7.7 Mail Groups and Alerts

DSS Extracts utilize a number of mail groups. The name of each mail group is prefaced with the letters "DSS". There is a mail group for each type of data extract (e.g., DSS-BCM, DSS-ADM, etc.) for the purpose of receiving messages when extracts are generated and data is transmitted to the AITC. DSS

also utilizes mail groups DMS, DMV and DMU for the purpose of receiving confirmation messages from the AITC. DSS Extracts do not utilize alerts.

7.8 Remote Systems

DSS Extracts transmit messages containing extracted data to a specified queue located at the AITC. Data is transmitted via VA MailMan at the site's discretion. Confirmation messages are received from the AITC indicating the extract messages were successfully transmitted.

7.9 Contingency Planning

Technical users of the DSS software should ensure that a local contingency plan is used in the event of application problems in a live environment. The plan should identify the procedure(s) for maintaining the functionality provided by the DSS Extracts software in the event of a system outage. Field Station ISOs can get assistance from the RISO.

7.10 Interfacing

There is no special interfacing required for the VistA DSS Extracts software.

7.11 Electronic Signatures

The DSS Extracts software does not use electronic signatures.

8 Archiving, Deleting or Purging

This section provides information on DSS application software features related to archiving, deleting, and purging of DSS data.

8.1 Archiving

DSS Extracts have no archiving capability. There is an option to delete the local extract files after transmission to the commercial software.

8.2 Deleting or Purging

DSS Extracts export the Delete Extract Files [ECXDELEF] option which can be used to delete individual extracts residing in files #727.802 through #727.833, or a range of extracts.

Data that resides in the holding files for VBECS (VBECS DSS EXTRACT file (#6002.03)), IVP (IV EXTRACT DATA file (#728.113)), and UDP (UNIT DOSE EXTRACT DATA file (#728.904)) extracts can be purged using the Purge Extract Holding Files [ECXPURG].

Extreme caution should be exercised when purging or deleting data for the following reasons:

- Any existing extract may be deleted (including transmitted and un-transmitted), as well as extracts that did not run to completion due to errors or system problems.
- Choosing a range of extracts or holding files sometimes results in an excessively large number of records to be deleted or purged, and may be very resource intensive. These tasks should be scheduled for non-peak hours, and the number of deleted or holding files purged should be limited to a single queued session.
- Extreme caution must be used when performing maintenance to the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904). If data in either file is purged, the IVP or UDP monthly extract may be incomplete. It is strongly recommended that, at a minimum, sites maintain all data from the *current fiscal year*.
- A user can only delete extracts that are associated with the division assigned in their NEW PERSON file (#200).
- Two functions were created to regenerate IVP and UDP holding file data that has been purged. These functions are located at:
 - Extract Manager's Options > Transmission Management > Recreate Extract Holding Files

The functions are listed in Table 15:

Table 15: Recreate IVP & UDP Holding File Options

Option	Description
I	Recreate IVP Extract Holding File (#728.113)
U	Recreate UDP Extract Holding File (#728.904)

8.2.1 Recommendations

Purging of any local VistA extract data or VistA source of extract data (i.e., lab data, etc.) is not recommended until a facility has successfully created extracts, transmitted them to the AITC, audited the counts, loaded the data into DSS, and the validation results are successful.

The IV EXTRACT DATA file (#728.113) and UNIT DOSE EXTRACT DATA file (#728.904) can become quite large if appropriate purging is not performed. The file purge option, Purge Extract Holding Files [ECPURG], removes the data from these files by date range. It is recommended that records over two fiscal years old should be purged from the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904).

VBECS holding files can also be purged. The VBECS holding file cannot be regenerated; therefore, extreme care must be used when purging these files.

9 External Relations

This section contains information related to external packages with which the DSS application software interacts.

9.1 Minimum Software Versions Required

The DSS Extract Package relies on the following external packages based upon the minimum software versions depicted in Table 16.

Table 16: External Package Minimum Versions Required

Software Product Name	Acronym	Minimum Version Required
Admission Discharge Transfer	ADT	5.3
Bar Code Medication Administration	BCMA	3.0
DSS Extracts	DSS	3.0
Event Capture	-	2.0
FileMan	-	22.2
Health Level 7	HL7	1.6
Kernel	-	8.0
Laboratory	-	5.2
Lab: Blood Bank	-	5.2
MailMan	-	8.0
Mental Health	-	5.01
Order Entry/Results Reporting	OE/RR	3.0
Patient Care Encounter	PCE	1.0
Pharmacy: Data Management	PDM	1.0
Pharmacy: Inpatient Medications	-	5.0
Pharmacy: National Drug File	NDF	4.0
Pharmacy: Outpatient Pharmacy	-	7.0
Prosthetics	-	3.0
Quality: Audiology and Speech Pathology Audit & Review	QUASAR	3.0
Radiology	-	5.0
Registration	-	5.3
Scheduling	-	5.3
Surgery	-	3.0

9.2 Database Integration Agreements (DBIAs)

Perform the steps in Table 17 from the FORUM Menu to obtain the DBIAs for DSS Extracts 3.0:

Table 17: Steps to Obtain DBIAs

Step	Custodial Package	Subscriber Package
1	DBA MENU	DBA MENU
2	INTEGRATION CONTROL REGISTRATIONS (ICR)	INTEGRATION CONTROL REGISTRATIONS
3	Custodial Package Menu	Subscriber Package Menu
4	ACTIVE ICRs by Custodial Package	Print ACTIVE by Subscribing Package
5	Select PACKAGE NAME: DSS	START WITH SUBSCRIBING PACKAGE: A// DSS
6	DEVICE: HOME// <Enter> SSH VIRTUAL TERMINAL <Enter> <u>Note: Secure Shell (SSH)</u>	GO TO SUBSCRIBING PACKAGE: ZZZ// DSS
7	N/A	DEVICE: <Enter> SSH VIRTUAL TERMINAL

10 Internal Relations

All of the DSS Extracts options have been designed to be stand-alone options. Each option may be independently invoked.

11 Package-wide Variables

The DSS Extracts software does not contain any package-wide variables that must be defined or are required for the package to run.

12 How to Generate Online Documentation

This section describes some of the various methods for users to access DSS Technical documentation. Online DSS technical documentation pertaining to the DSS software, in addition to that which is located in the Help prompts and Online Help screens, are imbedded throughout the DSS package and can be accessed through utilization of several KERNEL options. These include, but are not limited to, *XINDEX*, *Menu Management Inquire Option File*, *Print Option File*, and *FileMan List File Attributes*.

Entering question marks at the "Select ... Option:" prompt provides users with valuable technical information. For example:

- A single question mark (?) lists all options accessible from the current option.
- Entering two question marks (??) lists all options accessible from the current option displaying the formal name and lock for each.
- Three question marks (???) displays a brief description for each option in a menu while an option name preceded by a single question mark (?) displays extended Help, if available, for that option.

To obtain a listing of the available options and additional information about other utilities for online technical information, refer to the VA Software Document Library for [Kernel documentation](#).

12.1 XINDEX

This option analyzes the structure of a routine(s) to determine if the routine(s) adhere(s) to VistA Programming Standards. The XINDEX output includes the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references

When the user executes XINDEX for a specified set of routines, deviations from VistA Programming Standards in the selected routine(s) and routines interactions including routines called or called by other routines, are displayed.

To run XINDEX for the DSS software, specify the following namespaces at the "routine(s)? >" prompt: **ECX***.

When XINDEX runs the DSS initialization routines residing in the User Class Identifier (UCI), compiled template routines and local routines found within the ECX namespace should be omitted at the "routine(s)?>" prompt. To omit routines from selection, prefacing the namespace with a minus sign (-) is required.

12.2 Inquire to Option File

To access information about DSS options, the user must specify the name or namespace of the desired option(s). The Menu Manager option provides the following information about user-specified option(s):

- Option name

- Menu text
- Option description
- Type of option
- Lock (if any)

12.3 Print Options File

Use this utility to generate a listing of options from the OPTION file (#19). Users can choose to print all of the entries in this file specifying a single option or a range of options. To obtain a list of DSS options, enter “ECX” when prompted for the namespace.

12.4 List File Attributes

Use the “List Attributes” option in FileMan to generate documentation pertaining to files and file structures. Use the Standard format option to obtain the following data dictionary information for a specified file(s):

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files which point to the file specified
- Input, print, and sort templates

In addition, the following information is supplied for each field in the selected file:

- Field name and number
- Global location
- Description
- Help prompt
- Cross-reference(s)
- Input transform
- Date last edited
- Notes

Use the Global Map format option to generate an output listing of the following:

- All cross-references for the selected file
- Global location of each field in the file
- Input, print, and sort templates

Appendix A Acronyms and Abbreviations

Abbreviations and acronyms used throughout the DSS Technical Manual appear in Table 18.

Table 18: Acronyms and Abbreviations Table

Acronym	Description
ADM	Admissions Extract
ADPAC	Automated Data Processing Application Coordinator
ADT	Admission Discharge Transfer
AITC	Austin Information Technology Center
API	Application Programmer Interface
BCM	BCMA Extract
BCMA	Bar Code Medication Administration
CBOC	Community Based Outpatient Clinic
CLI	Clinic Extract
CPT	Current Procedural Terminology
CRT	Cathode Ray Tube
DBA	Database Administrator
DBIA	Database Integration Agreement
DCM	Department Cost Manager
DD	Data Dictionary
DEC	Digital Equipment Corporation
DEL Access	Delete Access
DSS	Decision Support System
ECS	Event Capture Extract
ECQ	QUASAR Extract
ECX	DSS Extracts Namespace
ESL	Enterprise Service Line
HL7	Health Level 7
ICD	International Classification of Diseases
ICR	Integration Control Registration
IEN	Internal Entry Number
ISO	Information Security Officer
IV	Intravenous
IVP	IV Detail Extract
LAB	Laboratory Extract
LAR	Lab Results Extract
LAYGO	Learn-As-You-Go
LBB	Blood Bank Extract
LOINC	Logical Observation Identifiers, Names, and Codes

Acronym	Description
MCAO	Managerial Cost Accounting Office
MOV	Physical Movement Extract
N/A	Not Applicable
NDC	National Drug Code
NDF	National Drug File
OE/RR	Order Entry/Results Reporting
OI&T	Office of Information and Technology
PCE	Patient Care Encounter
PDM	Pharmacy Data Management
PRE	Prescription Extract
PRO	Prosthetics Extract
QUASAR	Quality: Audiology and Speech Pathology Audit & Review
RAD	Radiology Extract
RD	Read Access
RISC	Reduced Instruction Set Computer/Computing
RISO	Regional Information Security Officer
SAS	Statistical Analysis System
SSH	Secure Shell
SUR	Surgery Extract
TRT	Treating Specialty Change Extract
UCI	User Class Identifier
UDP	Unit Dose Local Extract
VA	Department of Veterans Affairs
VAMC	Veterans Affairs Medical Center
VBECS	VistA Blood Establishment Computer Software
VDL	VA Software Document Library
VHA	Veterans Health Administration
VistA	Veterans Health Information Systems and Technology Architecture
WR Access	Write Access

Appendix B Glossary

Table 19 lists terms used throughout the Technical Manual.

Table 19: Glossary

Term	Definition
FileMan	This system implements the VistA database engine and is the basis for several patient safety controls, as well as fiscal integrity controls. It implements security, confidentiality, and privacy controls, and is a critical component in meeting the requirements of Enterprise Architecture.
Kernel	This system implements security, confidentiality, and privacy controls for VistA, including user authentication algorithms. It provides many tools for the safe construction of local software, and it implements many national control files, including, but not limited to, New Person, Institution, State, etc. This system is a critical component in meeting the requirements of Enterprise Architecture.
Remote Procedure Call (RPC)	This system supports client and/or server messaging used by CPRS, Bar Code Medication Administration (BCMA), and others, to access the MUMPS database through APIs. It provides a development kit for local development, and it implements security, confidentiality, and privacy controls. This system is a critical component in meeting the requirements of Enterprise Architecture.

Appendix C References and Related Materials

Table 20 lists the manuals related to DSS that are available to view on the [VA Software Document Library \(VDL\) for DSS](#) and the [VDL for the Kernel Infrastructure](#).

Table 20: Reference & Related Manuals on the VDL

File Name	Manual Name	Description
DSS_DIBR	DSS Extracts V3.0 Installation/Rollback Guide	Provides instructions on the installation of DSS Extracts application software.
DSS_DDD	DSS Extracts V3.0 Data Definitions	Provides detailed information that defines the data terminology.
DSS_UG	DSS Extracts V3.0 User Guide	Provides guidance for users of the DSS application software.
DSS_VDD	DSS Extracts V3.0 Version Description Document	Provides an overview of the new functionality and enhancements on the current release of the DSS application software.
Kernel Technical Manual	VistA Kernel Technical Manual Version 8.0	Provide users with technical information for Kernel operations.

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